

REMARKS

This is in response to the Office Action of December 22, 2006. Claims 1, 6, 7, 18, 21, 22, and 26-28 are currently pending in the application.

Claims 1, 6, 7, 18, 21, 22, and 26-28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 09-124200 in view of US 4,416,651 to Sullivan et al. ("Sullivan"). The rejection is respectfully traversed. It is noted that JP 09-124900 was issued to Masao TSURUTA et al. Accordingly that reference will be referred to hereinafter as "Tsuruta".

In the present invention, sheet detectors are disposed at an entrance side and at exit sides of a branch path. In accordance with the present invention, conveyance or manufacture of sheets, or of processed products of the sheets, is stopped if passage of the sheets or the processed products of the sheets is not detected by a sheet detector (at one of the exit sides of the branch path toward which the sheets or the processed products of the sheets are conveyed) ***after a predetermined time subsequent to when another sheet detector at the entrance side of the branch path detects passage of the sheets or processed products of the sheets.*** This is illustrated for instance in Figure 4B, step 150 (discussed in the last full paragraph on page 27 of the specification) and in step 104 in Figure 4A. Accordingly, conveyance or manufacture is stopped quickly when a failure occurs in any branch path. In this way, the time necessary for searching for missing sheets or processed products of sheets is reduced, and higher production efficiency is enabled.

The Examiner admits that the primary reference, Tsuruta, is completely silent as to the above significant feature of the present invention. The Examiner asserts, however, that "Sullivan discloses a similar method of controlling manufacture of product comprising the step of stopping conveyance of the sheet or the processed products when the sheet is not detected". Applicants respectfully

submit that the Examiner's position as stated involves a serious misinterpretation of the teachings of the ancillary Sullivan reference.

In Sullivan, an envelope B is conveyed toward a cylinder 12 by a feed belt 18. Column 3, lines 14-15. When a second sensing head or photocell 28 detects an index mark 26 on cam 24 and a first sensing head 20 detects the envelope B, the cylinder 12 rotates, and gum applying pads 14 and 16 apply gum on the envelope B when the envelope B is beneath the cylinder 12. Column 3, lines 44-57. Even when the second sensing head 28 detects the index mark 26, if the first sensing head 20 fails to detect the envelope B, cylinder 12 stops rotating and the envelope B does not have gum applied to it. Column 4, lines 61-68, and column 5, lines 22-29.

Accordingly, in Sullivan the envelope is conveyed in only one direction, and Sullivan does not disclose a branch path. Therefore, Sullivan does not disclose stopping conveyance or manufacture of sheets or of processed products of sheets if passage of the sheets or the processed products of the sheets is not detected by *a sheet detector at one of the exit sides of a branch path* towards which the sheets or the processed products of the sheets are conveyed, after a predetermined time after *another sheet detector at the entrance side of the branch path* detects passage of the sheets or the processed products of the sheets.

In the present invention, the step in question is not simply stopping conveyance when a sheet is not detected. As expressly recited in Applicants' claims, the step in question is "stopping conveyance ... of the sheets ... if passage of the sheets ... is not detected by a sheet detector ... after a predetermined time after another sheet detector at the entrance side of the branch path detects the passage of the sheets". In Applicants' invention, the stopping step is directly linked to a detection step, not just to a failure-to-detect step as in Sullivan.

An important feature of the present invention may be understood by reference to Figure 2, Figure 4, and page 27, line 15 through page 28, line 11 of the specification. In the present invention, once a predetermined time has passed after a first sheet detector (e.g., Fig. 4A, step 104; Fig. 2, detector 60A) at the entrance side of the branch path has detected the passage of the sheets or the processed products of the sheets, conveyance or manufacture of the sheets or the processed products of the sheets is stopped (Fig. 4B, step 150) if passage of the sheets or the processed products of the sheets is not detected by a sheet detector (e.g., Fig. 4B, step 110; Fig. 2, detector 60C) at one of the exit sides of the branch path to which the sheets or the processed products of the sheets are conveyed.

Thus, in the present invention, the stopping step in question is a diagnostic step which comes into play only when there is a malfunction in the manufacturing process of Applicants' claims. In contrast, in Sullivan, the stopping step is an essential part of Sullivan's process. Sullivan applies gum to an envelope when an envelope is sensed on a conveyor belt, and does not apply gum when no envelope is sensed on the conveyor belt.


Contrary to the Examiner's assertion, Sullivan does not disclose a "method of controlling manufacture of product comprising the step of stopping conveyance of the sheet or the processed products when the sheet is not detected". Instead, Sullivan discloses *stopping application of a gum* to an envelope when an envelope is not detected. Sullivan teaches nothing at all about *stopping conveyance of a sheet*, much less instituting such stoppage after a predetermined time after failure to detect a sheet. It is manifest that the combination of references upon which the Examiner now relies fails completely to suggest important features of Applicants' invention as claimed.

Applicants respectfully submit that each of claims 1, 6, 7, 18, 21, 22, and 26-28 herein defines an invention that differs materially, beneficially, and unobviously from any combination of technology placed in the possession of persons of ordinary skill in the art by the Tsuruta and Sullivan references. Accordingly, withdrawal of the rejection of record – and passage of this application to Issue – is in order and is earnestly solicited.

Please contact Richard Gallagher (Reg. No. 28,781) at (703) 205-8008 with any questions concerning the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,
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